1   1.   A shoe construction for a shoe, comprising:

2   a sole having a naturally contoured shape defined by a design

3   which conforms to the natural shape of the unloaded foot wherein

4   the theoretically ideal stability plane is determined by the

5   desired shoe sole thickness and by the natural shape of a foot

6   surface of the individual, said theoretically ideal stability plane

7   being defined at an edge of the shoe by the desired shoe sole

8   thickness in a frontal plane cross section, said shoe sole

9   thickness increasing beyond the theoretically ideal stability plane

10   to increase stability beyond its natural level.

1   2.   The shoe sole construction as set forth in claim 1 wherein

2   the thickness of the sole at least at one of the opposed edges of

3   said sole is thicker at the portions of the sole by a thickness

4   which gradually varies continuously from a first thickness through

5   at least an additional thickness.

1   3.   The shoe sole construction as set forth in claim 1 wherein

2   the thickness of the sole gradually varies so that at least a

3   portion of said sole has a thickness which is greater than the

4   thickness predicted by the theoretically ideal stability plane.

1   4.   The shoe sole construction as set forth in claim 1 wherein

2   the shoe sole is made from a material or materials which deform

3   when the shoe is worn thus naturally closely paralleling the

4   natural deformation of the bare foot under load.

1   5.   The shoe sole construction as set forth in claim 1 wherein

2   the shoe sole thickness varies in a frontal plane cross section.

1   6.   The shoe sole construction as set forth in claim 1,
2   wherein said shoe sole thickness increases beyond the theoretically
3   ideal stability plane in order to provide greater than natural
4   stability.

1   7.   The shoe sole construction as set forth in claim 1,
2   wherein said shoe sole thickness increases beyond the theoretically
3   ideal   stability   plane   in   such   a   manner   that   there   are
4   proportionately   equal   increases   to   the   theoretically   ideal
5   stability plane from the front of the shoe sole to its back.

1   8.   The shoe sole construction as set forth in claim 1 wherein
2   said shoe sole thickness increases beyond the theoretically ideal
3   stability plane in such a manner that the thickness varies from
4   one frontal plane cross section to another.

1   9.   The shoe sole construction as set forth in claim 2 wherein
2   variations in the increased thickness of the sole are determined
3   empirically.

1   10.   The shoe sole construction as set forth in claim 2
2   wherein said thickness variations are symmetrical as between
3   lateral and medial sides of said shoe.

1   11.   The shoe sole construction as set forth in claim 2
2   wherein said thickness variations are asymmetrical as between
3   lateral and medial sides of said shoe.

1   12.   The shoe sole construction as set forth in claim 2
2   wherein said thickness variations begin beneath the heel of the
3   wearer.

1   13.   The shoe sole construction as set forth in claim 2
2 wherein said thickness variations begin at a point beneath the heel
3 of the wearer, so that the theoretical ideal stability plane is
4 determined by the least thickness in the load-bearing portion of
5 the shoe sole.

1   14.   The shoe sole construction as set forth in claim 2
2 wherein said thickness variations increase then decrease along said
3 outer sole contour in a frontal plane cross section.

1   15,   A shoe sole construction for a shoe, comprising:
2   a sole having a naturally contoured shape defined by a design
3 which conforms to the natural shape of the unloaded foot wherein
4 the theoretically ideal stability plane is determined by the
5 desired shoe sole thickness which is normally constant in a frontal
6 plane cross section, said sole including a midsole having a density
7 variation to approximate a greater than natural stability, said
8 midsole having material of greater density nearer to the edge of
9 the shoe sole and material of lesser density nearer to the center
10 line of the shoe sole.

1   16.   The shoe as set forth in claim 15 wherein material of
2 least density is located beneath the heel of a wearer and material
3 of greater density is located adjacent said material of least
4 density.

1   17.   The shoe as set forth in claim 15 wherein said sole has
2 a portion which extends beyond the theoretically ideal stability
3 plane.

1   18.   The shoe as set forth in claim 15 wherein said density

2   variation is provided by variations in the bottom sole tread.

1   19.   A shoe construction comprising,

2   a shoe sole having opposed stability quadrant portions

3   at opposed edges of said sole, said quadrants portions having an

4   outer edge which is defined by a radius quarter than a radius

5   defining a theoretically ideal stability plane.

1   20.   A shoe construction for a shoe, comprising:

2   a sole having a naturally contoured shape defined by a design

3   which conforms to the natural shape of the unloaded foot wherein

4   the theoretically ideal stability plane is determined by the

5   desired shoe sole thickness and by the natural shape of a foot

6   surface of the individual, said theoretically ideal stability plane

7   being defined at an edge of the shoe by the desired shoe sole

8   thickness in a frontal plane cross section, said shoe sole

9   thickness decreasing from the theoretically ideal stability plane

10   to increase foot motion beyond its natural level.